

REMARKS

Reconsideration of the above identified application in view of the preceding amendments and following remarks is respectfully requested.

Claims 34, 35, 37-69, 71-79, 83-88 and 91-111 are pending in this application. By this Amendment, Applicant has canceled Claims 36 and 70 without prejudice and amended Claims 34, 37, 68, 69, 71-79, 83-88, 91-103 and 105.

The claim amendments were made to more precisely define the invention in accordance with 35 U.S.C. 112, paragraph 2 and limit their scope. It is respectfully submitted that no new matter has been introduced by these amendments, as support therefor is found throughout the specification and drawings.

Independent Claim 34

Method Claim 34 has been amended such that the method is *for providing transaction services in an ATM or Kiosk*. This feature is supported by Claim 36 as presently on file, which has correspondingly been deleted.

Claim 34 has been amended such that the ATM or Kiosk has *at least one transaction device type*. This feature is supported by page 8 lines 1-3 of the description and throughout the specification which discusses device types such as card readers and cash dispensers.

Claim 34 has been amended such that *the at least one software application interacts with said transaction device type through a programming interface of middleware software comprising transaction objects*. This feature is supported by page 15 lines 21-28 of the description and Claim 37 presently on file.

Claim 34 has been amended to delete the features of the middleware software layer *which extends the functionality of a computer operating system by providing the functional interface for the computer operating system to be written to, the computer operating system providing control functions of said computer based transaction machine and the functional interface providing an ability to co-operate with a dissimilar network.* The removal of these features points out and distinctly claims the subject matter which Applicant regards as his invention. It is not believed, nor is it intended, that this amendment should be viewed as a broadening amendment.

Claim 34 has been amended such that the *transaction services provided by the transaction objects depend on the capabilities of the transaction device type, but the programming interface of the transaction objects is independent of the capabilities of the transaction device.* This feature was added with the last Preliminary Amendment and the present amendment more precisely points out and distinctly claims the subject matter which Applicant regards as his invention. This is supported by page 19 lines 25-28 and page 16, lines 27-33 and page 13 lines 21-23 of the description.

Dependent Claim 36

Method Claim 36 has been deleted as its features have been incorporated into amended Claim 34.

Dependent Claim 37

Method Claim 37 has been amended in accordance with the transaction objects now being incorporated in Claim 34.

Independent Claim 68

Apparatus Claim 68 has been amended to incorporate the features commensurate with amended Claim 34 as presented above, including the features of Claim 70.

Dependent Claim 70

Apparatus Claim 70 has been deleted as its features have been incorporated into amended Claim 68.

Dependent Claim 71

Apparatus Claim 71 has been amended in accordance with the transaction objects now being incorporated in Claim 68 and to replace *computer-based transaction machine* with *ATM or Kiosk*.

Dependent Claims 69 and 72-105

Apparatus Claims 69 and 72-105 that depend on Claim 68 have been amended to replace *computer-based transaction machine* with *ATM or Kiosk*.

Background

The applicant company is engaged in writing, developing and installing computer software for use in automatic teller machines (ATMs) and electronic kiosks. Such ATMs and kiosks operate using standard computing equipment similar to that

found in a personal computer.

However, ATMs and kiosks are programmed to operate extremely sophisticated transaction device types such as electromechanical cash dispensing apparatus, key pads, card readers, user interface screens, to name but a few. In addition, the cost of such ATMs and kiosks is very high because of the extremely sophisticated engineering and software development that is required in order to ensure that these machines reliably perform the transactions that are associated with the transaction devices.

The operating systems that run ATMs and kiosks are designed to allow them to operate on certain specific manufacturer defined transaction devices. Whilst such transaction devices and software will work well with a specific type of ATM or kiosk, should the transaction device be changed or the owner of the ATM or kiosk wishes to replace a transaction device with another that has not been specified by the manufacturer, then this will cause the ATM or kiosk to malfunction. In general, therefore it is not a very trivial problem to design an ATM or kiosk in which any transaction device (of a given transaction device type) may be used.

In addition, where an ATM or kiosk is used in a network of similar devices, current software solutions make it very difficult to integrate ATMs and kiosks of different types in a single network because each type of ATM or kiosk may have different card readers, for example.

The method and apparatus of the present invention provide a solution to this problem by creating middleware software that is designed to be installed and operate along side the existing ATM or kiosk operating system. This additional middleware

software allows a software application to interact with any of the transaction devices that may be installed on the ATM or kiosk to provide transaction services that are dependent upon the capabilities of the transaction device type and through a programming interface that is independent of the capabilities of the transaction device.

Novelty

In the outstanding Office Action, Claims 34-79, 83-88, 91-105 and 110-111 were rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,856,974 to **Ganesan**. The Examiner's grounds for rejection are herewith traversed, and reconsideration is respectfully requested.

Ganesan discloses an electronic bill presentment system, which is depicted in Figure 4. The Ganesan system provides services to user entities 52 and allows them to have aggregated bill availability information, provided by the Electronic Payment Customer Service (EPCS) entity 58, but to interact directly with individual billing entities 56, thereby having the advantages of such direct interaction with billers, while retaining the benefits of interacting with a single aggregator. As described in Column 10, lines 37-43, the EPCS entity accomplishes this by functioning as an integration agent by maintaining bill payment profiles and warehouse data, aggregating bill availability and status (but not bill content or presentation). The EPCS entity 58 is not part of the hardware that the user interacts with and the user entity 52 does not provide transaction services depending on the capabilities of its hardware. Rather, the EPCS entity 58 is a distributed database entity (as shown in Figure 3) in the Ganesan system and acts as “the glue that holds the distributed database entities together”.

In contrast to Ganesan, amended Claim 34 recites a method for providing transaction services in an ATM or kiosk, the ATM or kiosk having at least one transaction device type, with the capabilities of transaction devices being non-identical between more than one ATM or kiosk across a network of ATM or kiosks, said ATM or kiosk being controlled by at least one software application and an operating system, both of which are installed in the ATM or kiosk.

wherein the at least one software application interacts with said transaction device type through a programming interface of middleware software comprising transaction objects and

wherein the transaction services provided by the transaction objects depend on the capabilities of the transaction device type, but the programming interface of the transaction objects is independent of the capabilities of the transaction device.

Consequently, the method provides transaction services on an automated teller machine (ATM) or an electronic kiosk and the middleware is within an ATM/kiosk machine that interacts with the end user. Further, the invention of Claim 34 allows the application software to use transaction services depending upon the particular capabilities of the transaction device type, through a programming interface independent of the capabilities of the transaction device.

The Ganesan system does not disclose or suggest that the middleware layer is in an ATM or kiosk or provides such services.

The EPCS entity 58 of the Ganesan system is simply not stored on the ATM or similar device, nor do the transaction services it provides depend on the capabilities of the transaction device type, with a programming interface independent of

the capabilities of the transaction device. Accordingly for at least these reasons, Claim 34 and, similarly, Claim 68 and each of the claims depending therefrom distinguish the subject invention from Ganesan.

In the previous Office Action, previous Claims 34-44, 46-51, 54, 57-62, 64-78, 80-85, 88, 91-96 and 98-109 were rejected under 35 U.S.C. §102(e) over U.S. Patent No. 6,003,019 to **Eaton**.

Eaton discloses an integrated financial services system, which is depicted in Figure 2. The Eaton system provides services to a customer 80 via a plurality of channels 82-87. Each channel 82-87 is hardware specific to provide access to the organization that sponsors the Eaton system. For example, the customer may use a telephone 92, an ATM 93, a branch office 94 and the like (items 95-97 and 99) to access the Eaton system. Eaton recognized that prior art information generated during transactions was only accessible by channels having similarly configured hardware channels. To overcome this obstacle and allow various hardware configurations to be able to collect data in a common form, the Eaton system has an integrated channel manager (ICM) 100. As shown in Figure 2 and at column 3, lines 18-21, the ICM 100 is not part of the hardware that the customer 80 interacts with and the customer hardware 92-97, 99 remains unchanged. Rather, the ICM 100 is centrally located with the data storage in the Eaton system and acts as a translator for each channel 82-87.

The Eaton system does not disclose or suggest that the middleware layer is in an ATM or kiosk, or provides transaction services depending upon the particular capabilities of the transaction device type, through a programming interface independent of the capabilities of the transaction device.

The ICM 100 of the Eaton system is not stored on the ATM or similar device, nor do the transaction services it provides depend on the capabilities of the transaction device type, with a programming interface independent of the capabilities of the transaction device. Accordingly for at least these reasons, Claim 34 and, similarly, Claim 68 and each of the claims depending therefrom distinguish the subject invention from Eaton.

Therefore, withdrawal of the rejection is respectfully requested.

Any additional fees or overpayments due as a result of filing the present paper may be applied to Deposit Account No. 04-1105. It is respectfully submitted that all of the claims now remaining in this application are in condition for allowance, and such action is earnestly solicited.

If after reviewing this amendment, the Examiner believes that a telephone interview would facilitate the resolution of any remaining matters the undersigned attorney may be contacted at the number set forth herein below.

Respectfully submitted,

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